

EVERY DAY SINCE 1946

LR Motor Shop Repairs

Job Number 104430

Prepared for AMERICAN SILICA

389 LAWRENCE COUNTY ROAD 210 BLACK ROCK AR 72415

Table of Contents

AC Inspection as Found - LR MOTOR SHOP



AMERICAN SILICA

389 LAWRENCE COUNTY ROAD 210 BLACK ROCK, AR 72415

AC Inspection	- Rev. 2
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Location:	LR MOTOR SHOP
Serial Number:	SG2-4730

Description:2.5 HP DERRICK

FolderID: 104430 FormID: 24059338

	Hi-Speed Job Number:	104430
OP	Product Number:	SG-238-18-460/480-6-001
	Serial Number:	SG2-4730
	HP/kW:	2.5 (HP)
	RPM:	1800 (RPM)
	Voltage:	460
	Current:	4.1 / 2 (Amps)
	Phase:	Three
	Hz:	60 (Hz)
	Service Factor:	1.0
	Enclosure:	TENV
	# of Leads:	3
	J-box Included:	Complete
	Coupling/Sheave:	None
	Bearing RTDs:	No
	Stator RTDs:	No
	Repair Stage:	Final
	Rewind:	No
	Shaft Machined Fit Repairs Required:	No
	Bearing Housing Machined Fit Repairs Required:	No
	Heaters:	No
	Winding Type :	Random Wound
	Bearing Type:	Rolling Element
🔵 2 - Medium	🔵 18 - Good	

Overall Condition

1. Report Date

Priorities Found: 🔵 2 - High

04/22/2025

2. Nameplate Picture



3. Photos of all six sides of the machine.





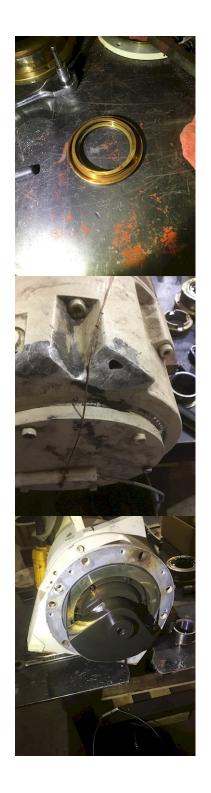
























	4.	Describe the Overall Condition of the Equipment as Received	
		Dirty	
	5.	Is this a UL Listed Motor	(No) No
	6.	Is the motor water cooled or can be pressure checked before teardown	(No) No
Ini	tial	Mechanical/Electrical	
	7.	Does Shaft Turn Freely?	(Y) Yes
	8.	Does the shaft require T.I.R in Lathe to identify additional repairs?	(No) No
	9.	Does Shaft Have Visible Damage?	(No) No
	10.	Assembled Shaft Runout	Inches

11. Assembled Shaft End Play	inches
12. Air Gap Variation <10%	
13. Lead Condition	(P) Pass
14. Lead Length	8 Inches
15. Does it have Lugs?, If so what is the Stud Size?	(Yes) Yes
16. Lead Numbers	1-3
17. Are the Leads insulated with Chico or other material	(No) No
18. Frame Condition	
19. Fan Condition	(N) NA
20. Does motor have internal fan?	(No) No
21. Broken or Missing Components	

DE oil cavity has a hole in it



Initial Electrical Inspection

22. Insulation Resistance/Megger

Megohm Stat PASS No Test Volts (V) 491 1 I(µA) 1.145 1 Resist 429 1 At 40°C 115 1 Dissame No Test No Test Nameplate Application Results Summary	Coil 3 (Ohms)	3.671 Corr: 3.7	
I(µA) 1.145 Resist 429 At 40°C 115 DIStatic No Test Nameplate Application Results Summary	Megohm Stat	PASS	No Test
Resist 429 At 40°C 115 DI Static No Test Nameplate Application Results Summary	Volts (V)_	491	
At 40°C 115 DI Statue No Test No Test Nameplate Application Results Summary	I(μA)	1.145	
DI Statue No Test No Test Nameplate Application Results Summary	Resist	429	
Nameplate Application Results Summary		115	F
Entro and a summary			
	Nameplate		

Megohms

1-2	1-3	2-3
t Status PASS No Te		
.1 (Ohms)		
L2 (Ohms)		
L3 (Ohms)		
-L2 (Ohms) 7.342 Corr: 7.4 2-L3 (Ohms) 7.342 Corr: 7.4		
2-L3 (Ohms) 7.342 Corr: 7.4 3-L1 (Ohms) 7.342 Corr: 7.4		
Max Delta R % 0.005		
Coil 1 (Ohms) 3.671 Corr. 3.7 Coil 2 (Ohms) 3.671 Corr. 3.7		
Coil 3 (Ohms) 3.671 Corr. 3.7		
Nameplate Application Results Summa		
(t)		
Contraction of the second seco		
24. Perform Surge Test		(P) Pass
Voit Votors		
Imperature Manual		
Registance 3Lead/LowV PASS		
MegOhm 500 Volts PASS		
F B 500 Volts N Step-Voltage 1400 Volts		
ge Test Surge 1500 Volts PASS		
-		
■ <u>Φ</u> 1001. <i>P</i> ∧ <i>R</i> 4. 42278		
Strength		
D. Number of Otation Otation		
25. Number of Stator Slots		
26. Stator Condition		
27. Stator Thermistors/Ohms		
28. Stator Overloads/Ohms		
0.2		
chanical Inspection		0//5
29. Drive End Bearing Brand		SKF
80. Drive End Bearing Numbe	r-	2311
31. Drive End Bearing Qty.		
32. Drive End Bearing Type		(Roller) Roller Bearing
 B3. Drive End Lubrication Typ 	e on or Grounding Device?	(Oil) Oil Lubricated
Drive End Bearing Insulati		

36. Drive End Bearing Condition

Signs of false brinelling that turned into metal fatigue



37.	Opposite Drive End Bearing Brand	SKF
38.	Opposite Drive End Bearing Number-	2311
39.	Opposite Drive End Bearing Qty.	1
40.	Opposite Drive End Bearing Type	(Roller) Roller Bearing
41.	Opposite Drive End Lubrication Type	(Oil) Oil Lubricated
42.	Opposite Drive End Bearing Insulation or Grounding Device?	
43.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	
44.	Opposite Drive End Bearing Condition	
	Contamination	



4 5.	Drive End Seal	labyrinth seal
4 6.	Opposite Drive End Seal	labyrinth seal
Rotor	Inspection	
47.	Rotor Type/Material	(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast
48.	Growler Test	(Pass) Pass
49.	Number of Rotor Bars	
50.	Rotor Condition	
51.	List the Parts needed for the Repair Below	
	2311x2	

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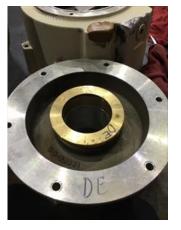
N	lecha	anical Fits- Rotor			
	53.	Shaft Runout			inches
	54.	Rotor Runout			
		Drive End Bearing Fit	Rotor Body	Opposite Drive End E	Bearing
	55.	Coupling Fit Closest to Bearing Housi			
		0 Degrees	90 Degrees	120 Degrees	
	56	Coupling Fit Closest to the end of the	Shaft		
	00.	0 Degrees	60 Degrees	120 Degrees	
		0 Degrees	of Degrees	120 Degrees	
	57.	Drive End Bearing Shaft Fit			
		0 Degrees	60 Degrees	120 Degrees	
_	•	2.1654-2.1653-2.1654			
		Drive End Bearing Shaft Fit Condition			(P) Pass
	59.	Opposite Drive End Bearing Shaft Fit			
		0 Degrees	60 Degrees	120 Degrees	
		2.1654-2.1654-2.1654			
	60.		Condition		(P) Pass
		Shaft Air Seal Fits			(.)
	-	Drive End Air Seal	Opposite Drive End Air Seal		
N	lecha	anical Fits- Bearing Housings			
	62.	Drive End - Endbell Bearing Fit			
		0 Degrees	60 Degrees	120 Degrees	
	_				
	•	4.7234-4.7236-4.7235			
		Drive End - Endbell Bearing Fit Condi			(P) Pass
	64.	Opposite Drive End - Endbell Bearing			
		0 Degrees	60 Degrees	120 Degrees	
		4.7233-4.7233-4.7234			
	65.	Opposite Drive End - Endbell Bearing	Fit Condition		(P) Pass
	66.	Bearing Cap Condition			
		Drive End Bearing Cap	Opposite Drive End Bearing Cap		
	67.	End Bell Air Seal Fits			
		Drive End Air Seal	Opposite Drive End Air Seal		
	60	List Machine Work Needed Delaw			
	OŎ.	List Machine Work Needed Below			

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77. Photograph All Major Components prior to assembly





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Cw

(Complete) Complete







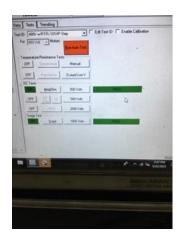
78. Final Insulation Resistance Test







Megohms



79.	Assembled Shaft Endplay			inches
80.	Assembled Shaft Runout			inches
81.	Test Run Voltage			
	Volts	Volts	Volts	
82.	Test Run Amperage			
	Amps	Amps	Amps	
83.	Drive End Vibration Readings - Inche	s Per Second		
	Horizontal	Vertical	Axial	
84.	Opposite Drive End Vibration Reading	gs - Inches Per Second		
	Horizontal	Vertical	Axial	
85.	Ambient Temperature - Fahrenheit			
86.	Drive End Bearing Temps - Fahrenhe	it		
	5 Minutes	10 Minutes	15 Minutes	
87.	Opposite Drive End Bearing Temps -	Fahrenheit		
	5 Minutes	10 Minutes	15 Minutes	

88. Document Final Condition with Pictures after paint







89. Final Pics and QC Review

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Co sign: RRW

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- 5. DELIVERY OF GOODS AND/OR SERVICES. Unless otherwise identified in the quotation, all shipments are F.O.B. Hi-Speed's warehouse and the title to and all risk of loss with respect to any goods shipped shall pass to Buyer when such goods are delivered to the carrier at Hi-Speed's warehouse. Hi-Speed will use its best efforts to affect delivery by the date or dates specified in the quotation. However, Hi-Speed shall not be liable for delay in or failure to make shipment, or to perform services, by any identified date for any reason whatsoever, including but not limited to, causes beyond its reasonable control, such as strikes, fires, floods, epidemics, quarantines, restrictions, severe weather, embargos, acts of God, or public enemy, war, riot, delays in transportation or the inability to obtain necessary labor, materials or manufacturing facilities.
- 6. DELIVERY SITE AND TIME FOR PERFORMANCE. Hi-Speed and Buver agree that time is of the essence for the purchase order and that Buyer shall fully cooperate with Hi-Speed in order to allow Hi-Speed full access to prosecute its work diligently and in an orderly manner. Buyer shall assist Hi-Speed in every way possible to avoid delaying, disrupting or interfering with the progress of Hi-Speed's work at the project site. In the event Hi-Speed's work is delayed, hindered, suspended, disrupted, re-sequenced or interfered with or rendered less efficient or more costly or adversely affected in any way as a result of acts or omissions of Buyer or other contractors or employees of Buyer or by any other reason beyond Hi-Speed's control and without the fault of Hi-Speed, then, in such event, Buyer shall be liable to Hi-Speed for any damages, additional costs, expenses, labor, materials, man hours, acceleration costs, overtime, additional jobsite overhead, extended home office overhead, and any and all other direct and indirect expenses of whatsoever nature or kind, caused in whole or in part, as a result of any of the above-referenced occurrences. Hi-Speed's project records will be the basis for computing the additional costs and damages of Hi-Speed's labor, materials, expenses and overhead related to such changes. BUYER WARRANTS THAT THE SITE FOR DELIVERY OR INSTALLATION OF ANY GOODS AND/OR FOR THE PERFORMANCE OF ANY SERVICES SHALL BE READY AND ADEQUATE FOR HI-SPEED'S DELIVERY OF GOODS AND/OR PERFORMANCE OF SERVICES AND THAT HI-SPEED SHALL HAVE FULL ACCESS THERETO, FREE OF ALL OBSTRUCTIONS. BUYER SHALL ASSUME ALL EXTRA COSTS ASSOCIATED WITH HI-SPEED'S INABILITY TO INSTALL ANY GOODS OR PERFORM ANY SERVICES AS A RESULT OF BUYER'S FAILURE TO COMPLY WITH THIS PROVISION. HI-SPEED MAY NOT INSPECT THE SITE PRIOR TO DELIVERY AND/OR INSTALLATION OF GOODS AND/OR PERFORMANCE OF SERVICES AND MAKES NO WARRANTY AS TO THE SUFFICIENCY OF THE SITE FOR THE DELIVERY AND/OR INSTALLATION OF GOODS AND/OR THE PERFORMANCE OF SERVICES AT SUCH SITE.
- 7. INSPECTION/ACCEPTANCE. All goods and services ordered pursuant to any quotation shall be subject to inspection by Buyer after delivery or performance to determine conformity with the quotation and/or purchase order and Hi-Speed's advertised or published specifications. Buyer shall have a period of thirty (30) days from shipment of goods at the delivery destination specified in the quotation within which to inspect the goods for conformity with the quotation, order and/or Hi-Speed's advertised and published specifications and to provide Hi-Speed with written notice of any discrepancy or rejection. Buyer shall have a period of thirty (30) days following completion of any services within which to inspect the services for conformity with the quotation, purchase order and/or Hi-Speed's advertised and published specifications and to provide Hi-Speed with written notice of any discrepancy or rejection. If the goods delivered or services performed do not so conform, upon delivery of notice to Hi-Speed of any discrepancy, nonconformance or rejection, Hi-Speed shall have sixty (60) days to cure the alleged discrepancy and/or nonconformance. If Hi-Speed fails to cure in this time period, Buyer shall have the right to reject such goods or services. After the cure period, goods that have been delivered and rejected, in whole or in part, shall be returned to Hi-Speed shall, at its sole cost, re-perform the non-conforming services. Inspection or failure to inspect on any occasion shall not affect Buyer's rights under the warranty provisions herein.
- 8. WARRANTIES. Hi-Speed warrants that all goods shall conform in all material aspects to the goods identified in the quotation to Buyer and/or purchase order, and Hi-Speed makes to Buyer the manufacturer's express warranty for any goods sold to Buyer, which is offered by the manufacturer at the time of acceptance of any quotation by Buyer. This warranty is conditioned upon the installation, operation, and maintenance of the goods in accordance with the manufacturer's recommendations and/or standard industry practice and the goods at all times being operated or used under normal operating conditions for which they were designed. Hi-Speed, at its sole option, will repair or

TermsAndConditions

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- 10. <u>SEVERABILITY</u>. The partial or complete invalidity of any provision of these Standard Terms and Conditions shall not affect the enforceability of the remainder of these Standard Terms and Conditions. If any provision is found to be invalid or unenforceable, that portion shall be modified to make it enforceable or shall be stricken and the remainder of these Standard Terms and Conditions shall enforced.
- 11. <u>GOVERNING LAW AND JURISDICTION.</u> Any controversy arising out of any quotation, the purchase order, the goods sold or delivered, repair or replacement thereof, or any services provided pursuant to any quotation or any purchase order, or these Standard Terms and Conditions shall be governed by the laws of the state of Tennessee without regard to any choice of law provisions and any cause of action related in any manner thereto shall be brought only in the state or federal courts of Shelby County, Tennessee.
- 12. <u>ABANDONED EQUIPMENT.</u> Hi-Speed requires that Buyer promptly pick up or provide shipment instructions for Buyer equipment or other Buyer property in Hi-Speed's possession. If equipment or other Buyer property is left with Hi-Speed and not picked up within six (6) months after Hi-Speed's final action related to the applicable property (e.g. evaluation, teardown, estimate, completion of services), Hi-Speed will consider such property abandoned and may dispose of it in accordance with applicable law. Buyer agrees to hold Hi-Speed harmless for any damage or claim for such abandoned property and acknowledges that Hi-Speed may discard or recycle it at Hi-Speed's sole and absolute discretion. Specifically, Hi-Speed may sell Buyer's abandoned property at a private or public sale and retain the proceeds to offset Hi-Speed's storage, inspection and servicing costs. For the avoidance of doubt, Hi-Speed reserves its statutory and other lawful liens for unpaid charges related to abandoned property.
- 13. FORCE MAJEURE. Neither party shall be responsible for any delay or failure in performance of any party of the quotation, purchase order or these Standard Terms and Conditions to the extent that such delays or failures are caused by fire, flood, earth quake, explosion, war, embargo, government requirement, civil or military authority, acts of God, or any other circumstances beyond its reasonable control and not involving any fault or negligence on the party affected ("Condition"). If any such Condition occurs, the party delayed or unable to perform shall promptly give written notice to the other party and, if such Condition remains at the end of thirty (30) days, the party affected by the other party's delay and inability to perform may elect to (i) terminate such order or part thereof, or (ii) suspend the order for the duration of the Condition, if the Buyer is the suspending party, buy elsewhere comparable material to be sold under the order and apply to any commitment the purchase price of such purchase, and resume performance of the order once the Condition ceases, with an option in the affected party to extend the period of this order up to the length of the time the Condition endures.
- 14. <u>NONWAIVER</u>. No course of dealing or failure of either party to strictly enforce any term, right, or condition of these Standard Terms and Conditions will be construed as a waiver of such term, right or condition. Any waiver by Hi-Speed will only be in writing and will waive no succeeding breach of a term, right or condition.
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